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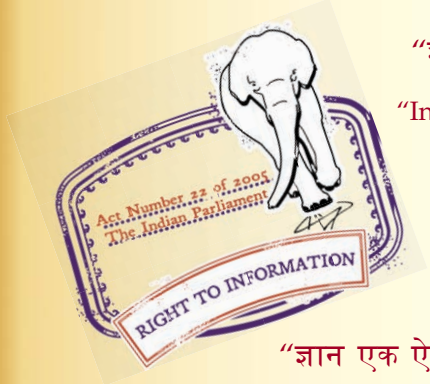

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Bhartṛhari—Nītiśatakam
"Knowledge is such a treasure which cannot be stolen"

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IS 4113 (Part 2) : 2003
ISO 7376-2 : 1997

भारतीय मानक

लेरिंगोस्कोपिक फिटिंग

भाग 2 बिजली के छोटे बल्ब—पारंपरिक ब्लेडों के लिए पेंच चूड़ियां और सॉकेट

(दूसरा पुनरीक्षण)

Indian Standard

LARYNGOSCOPIC FITTINGS

PART 2 MINIATURE ELECTRIC LAMPS—SCREW THREADS AND SOCKETS FOR CONVENTIONAL BLADES

(Second Revision)

ICS 11.040.10

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

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Price Group 2

NATIONAL FOREWORD

This Indian Standard (Part 2) (Second Revision) which is identical with ISO 7376-2:1997 'Laryngoscopic fittings — Part 2: Miniature electric lamps — Screw threads and sockets for conventional blades' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendations of the Anaesthetic, Resuscitation and Allied Equipment Sectional Committee and approval of the Medical Equipment and Hospital Planning Division Council.

Two Indian Standard specifications for laryngoscopes, namely, IS 3949:1971 'Dimensions and screw thread for lamp used in laryngoscopes' and IS 4113:1967 'Specification for laryngoscopes' were published earlier. In view of technological developments at the national and international levels, IS 4113:1967 was revised and published in two parts which were identical with ISO Standards as given below:

	Indian Standards	*International Standards*
a)	IS 4113 (Part 1):1986 Laryngoscopes : Part 1 Hook-on type handle-blade fittings (*first revision*)	ISO 7376-1:1984 Laryngoscopic fittings — Part 1: Hook-on type handle-blade fittings
b)	IS 4113 (Part 2):1986 Laryngoscopes: Part 2 Miniature electric lamps — Screw threads and sockets (*first revision*)	ISO 7376-2:1984 Laryngoscopic fittings — Part 2: Miniature electric lamps — Screw threads and sockets

Since the requirements of IS 3949:1971 were covered under Part 2 of this standard, IS 3949:1971 will be withdrawn.

The second revision of IS 4113 (Part 2) has been undertaken to incorporate the modifications effected in the second edition of ISO 7376-2 brought out in 1997. In this revision two types of lamps, that is, small and large have been specified in place of one given earlier. The lamp and socket dimensions have also been modified.

Annex A is for information only.

The text of International Standard has been approved as suitable for publication as Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.

b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS 2:1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

LARYNGOSCOPIC FITTINGS

PART 2 MINIATURE ELECTRIC LAMPS—SCREW THREADS AND SOCKETS FOR CONVENTIONAL BLADES

(Second Revision)

1 Scope

This part of ISO 7376 specifies requirements for screw threads for miniature electric lamps and lamp sockets used in laryngoscopic blades as described in ISO 7376-1. The contact, form and general dimensions of these lamps are also specified.

2 Normative reference

The following standard contains provisions, which, through reference in this text, constitute provisions of this part of ISO 7376. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this part of ISO 7376 are encouraged to investigate the possibility of applying the most recent edition of the standard listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 5864: 1993, *ISO inch screw threads - Allowances and tolerances*

3 Definitions

For the purposes of this part of ISO 7376, the following definitions apply:

3.1 lamp
Electric filament bulb intended to provide illumination during laryngoscopy.

[ISO 4135:1995]

3.2 metal cap
Metallic outer housing of the lamp which provides electrical contact and mechanical engagement of the lamp by means of a male screw thread.

[ISO 4135: 1995]

3.3 socket
Component with a female screw thread attached to a laryngoscope blade and intended to provide electrical contact and mechanical engagement with a lamp.

[iSO 4135:1995]

4 Materials

Components of electrical contacts shall be made of corrosion-resistant electroconductive materials to ensure durability and continuity in the circuit between the socket and the lamp.

NOTE It is recommended that materials and design be such that the assembled laryngoscope blade is autoclaveable.

5 Electric lamp

5.1 Metal cap and base contact

5.1.1 The metal cap and base contact of the electric lamp, including insulation and seal, shall be in accordance with figure 1 and table 1.

5.1.2 The outside of the metal cap shall be designed to facilitate insertion and removal of the lamp from the socket.

5.1.3 The base contact of the lamp shall be rigidly mounted and shall be capable of withstanding the axial force applied during insertion of the lamp. All dimensions, except for those occurring when seals are compressed, shall remain unchanged under normal use.

5.2 Screw thread for lamp

5.2.1 The screw thread of the metal cap for small lamps shall have the nominal size and designation of 1/8-72 UN-3A and shall be designed in accordance with ISO 5864.

5.2.2 The screw thread of the metal cap for large lamps shall have the nominal size and designation of No. 8-32 UNC 2A and shall be designed in accordance with ISO 5864.

6 Sockets

6.1 Dimensions and centre contact

6.1.1 The socket dimensions shall be in accordance with figure 1 and table 1.

6.1.2 When the lamp is unscrewed it shall cease to be lit at least 1,5 turns prior to disengagement of the lamp from the socket.

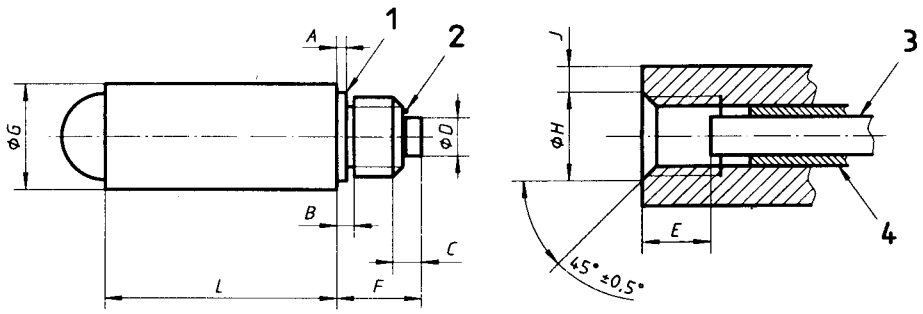
NOTE The socket should provide a grip which resists rotation of the lamp once screwed in position.

6.1.3 The centre contact shall have a mechanism for maintaining electrical contact with the lamp (for example, a spring).

6.2 Internal screw thread for socket

6.2.1 The internal screw thread of the socket for small lamps shall have the nominal size and designation of 1/8-72 UN-3B and shall be designed in accordance with ISO 5864.

6.2.2 The internal screw thread of the socket for large lamps shall have the nominal size and designation of No. 8-32 UNC-2B and shall be designed in accordance with ISO 5864.



a) Lamp b) Socket

1 Seal

2 Lamp insulator

3 Centre contact

4 Socket insulator

C is the distance to the start of the full thread.

E is the depth of the electrical contact in the socket prior to lamp insertion.

H is the outside diameter of the socket thread chamfer.

J is the minimum width of the flat sealing face.

NOTE 1 Electrical continuity of the contacts for the small lamp is ensured when the sealing washer is compressed by (35 ± 10) % during installation.

NOTE 2 Electrical continuity of the contacts for the large lamp is ensured when either the sealing washer is compressed by (15 ± 5) % or the O-seal is compressed by (65 ± 5) % during installation.

Figure 1 — Lamp and socket dimensions (see also table 1)

Table 1 — Lamp and socket dimensions (see also figure 1)

Dimensions in millimetres

Size	*A*		*B*	C	*D*	*E*	*F*	*G*	*H*	*J*	*L*
	Washer	O-seal									
Small 1/8"-72 UN	0,5 ± 0,1		0,8 ± 0,2	1,0 ± 0,2	1,4 ± 0,4	2,6 ± 0,4	4,0 ± 0,3	4,3 ± 0,2	3,7 ± 0,2	0,2 min.	11,5 ± 2,5
Large No. 8-32 UNC	0,5 ± 0,1	ø 0,9 ± 0,05 section	0,9 ± 0,2	1,2 ± 0,2	2,0 ± 0,5	3,5 ± 0,4	4,9 ± 0,3	5,5 ± 0,5	4,6 ± 0,2	0,2 min.	12 ± 2,5
NOTE — All angles shall have a tolerance of ± 0,5°.											

Annex A
(informative)

Bibliography

[1] ISO 4135:1995, *Anaesthesiology— Vocabulary*

[2] ISO 7376-1:1994, *Laryngoscopic fittings — Part 1: Conventional hook-on type handle-blade fittings*

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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